

PLEASE ENTER THE FOLLOWING CLAIMS

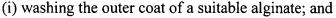
- 110. A method of preparing a xenotransplantable porcine islet comprising the steps of:
 - (i) harvesting the pancreas of piglets from -20 to +10 days full term gestation, and
 - (ii) extracting pancreatic β islet cells from the harvested pancreas; and
- (iii) exposing the islets to nicotinamide either before or after either the steps of harvesting or extracting.
- 111. The method as claimed in claim 110. wherein the piglets are from -7 to +10 days full term gestation.
- 112. The method as claimed in claim 110 wherein the step of xtraction includes the use of human Liberase.
- 113. The method of claim 110 wherein the harvested pancreas is in a supportive mammalian albumin substantially free of non-human microbiological agents.
- 114. The method of claim 113 wherein the mammalian albumin comprises human serum albumin (HSA).
- 115. The method of claim 110 wherein the step of exposing occurs after the step of extracting.
- 116. The method as claimed in claim 110 further comprising the step of treating the islets with one of IGF-1 and the N-terminal tripeptide of IGF-1 (GPE).
- 117. The method as claimed in claim 116 wherein the step of treating the islets comprises the treating thereof with GPE.
- 118. The method as claimed in claim 116 wherein the exposure to either of IGF-1 or GPE is greater for those cells from piglets furthest from full term gestation.
- 119. The method as claimed in claim 116 wherein the exposure to IGF-1 is unrelated to their relationship with full term gestation.
- 120. The method as claimed in claim 110 further comprising the step of subjecting at least one of the pancreas and the islets to a trauma protecting agent.
- 121. The method as claimed in claim 120 wherein the trauma protecting agent comprises an anaesthetic agent.
- 122. The method as claimed in claim 121 wherein the anaesthetic agent comprises lignocaine.



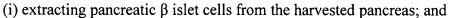
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- 123. The method as claimed in claim 110 further comprising the step of mechanically reducing the harvested pancreas in the presence of an islet trauma protecting agent.
- 124. The method as claimed in claim 110 further comprising the step of associating a quinaline antibiotic with the islet cells.
- 125. The method as claimed in claim 124 wherein the quinaline antibiotic comprises ciproxin.
- 126. The method as claimed in claim 110 further comprising the steps of encapsulating the islet cells with a biocompatible xenotransplantable material, said material being both glucose and insulin porous, the biocompatible xenotransplantable material comprising a suitable alginate in ultra pure form.
- 127. The method as claimed in claim 126 wherein the step of encapsulating comprises the steps of:
- (i) presenting islets and the suitable alginate in ultra pure form into a source of compatible cations; and
 - (ii) entrapping the islets in a cation-alginate gel.
- 128. The method as claimed in claim 127 wherein the cation alginate gel comprises calcium-alginate gel.
- 129. The method as claimed in claim 128 wherein the alginate in ultra pure form comprises sodium alginate.
- 130. The method as claimed in claim 129 wherein a resulting solution of islet and sodium alginate is of 1.6% w/w.
- 131. The method as claimed in claim 129 wherein the suitable cation comprises calcium chloride.
- 132. The method as claimed in claim 127 further comprising the steps of:
 - (i) coating the gel encased islets with a positively charged material; and
 - (ii) providing an outer coat of a suitable alginate.
- 133. The method as claimed in claim 132 wherein the positively charged material comprises a poly-L-ornithine.
- 134. The method as claimed in claim 132 further comprising the step of liquefying the gel entrapping the islets.
- 135. The method as claimed in claim 134 wherein the step of liquefying comprises the step of exposing the gel to sodium citrate.
- 136. The method as claimed in claim 134 further comprising the steps of:





- (ii) recoating the outer coat with a suitable alginate.
- 137. The method as claimed in claim 126 wherein the step of encapsulation produces at least one capsule.
- 138. The method as claimed in claim 137 wherein the at least one capsule includes a plurality of islet cells.
- 139. The method as claimed in claim 138 wherein the at least one capsule includes at least three islet cells.
- 140. The method as claimed in claim 137 wherein the at least one capsule includes a diameter of about 300 to 400 microns.
- 141. A method of treating a mammalian patient suffering from diabetes, the method comprising the steps of:
 - (i) extracting pancreatic β islet cells from the harvested pancreas; and
- (ii) encapsulating the islet cells with a biocompatible xenotransplantable material, said material being both glucose and insulin porous;
- (iii) introducing a trauma protecting agent during or prior to the step of encapsulating; and
- (iv) transplanting into the mammalian patient an effective amount of viable islet cells capable of producing insulin in the patient.
- 142. The method as claimed in claim 141 wherein the trauma protecting agent is selected from suitable anaesthetic agents.
- 143. The method as claimed in claim 142 wherein the trauma protecting agent comprises lignocaine.
- 144. The method as claimed in claim 141 further comprising the step of subjecting the patient to a cholesterol lowering drug regime prior to, during or after the step of transplanting.
- 145. The method as claimed in claim 144 wherein the drug regime comprises one of the "statin" family.
- 146. The method as claimed in claim 145 wherein the drug regime comprises one of the group consisting of pravastatin and simvistatin.
- 147. The method as claimed in claim 141 further comprising the step of prescribing to the patient, prior to or after the transplanting step, a casein-free diet.
- 148. A method of treating a mammalian patient suffering from diabetes, the method comprising the steps of:



- (ii) encapsulating the islet cells with a biocompatible xenotransplantable material, said material being both glucose and insulin porous;
- (iii) transplanting into the mammalian patient an effective amount of viable islet cells capable of producing insulin in the patient; and
- (iv) subjecting the patient to a cholesterol lowering drug regime prior to, during or after the step of transplanting.
- 149. The method as claimed in claim 148 wherein the drug regime comprises one of the "statin" family.
- 150. The method of claim 149 wherein the drug regime comprises one of the group consisting of pravastatin and simvistatin.
- 151. The method as claimed in claim 150 further comprising the step of prescribing to the patient, prior to or after the transplanting step, a casein-free diet.

